

WHAT IS CLAIMED IS:

1. A guide rail clamp for gripping and supporting a guide rail, comprising:
 - a first clamp half having a first slot extending transversely through the first clamp half, the slot having arcuate sections adapted to receive a cylindrical rod and flat sections adapted to receive a rectangular bar;
 - a second clamp half removably secured to said first clamp half, said second clamp half having a second slot in alignment with said first slot when said first clamp half is adapted to be secured to said second clamp half;
 - a first fastener configured to removably secure said first and second clamp halves; and
 - a second fastener adapted to secure said clamp to said bar or rod.
2. The guide rail clamp of Claim 1, wherein said first and second clamp halves further comprise a hole extending therethrough for receiving said first fastener.
3. The guide rail clamp of Claim 2, wherein said first fastener comprises a bolt and a threaded nut.
4. The guide rail clamp of Claim 3, wherein said threaded nut comprises an axial threaded sleeve attached to said nut.
5. The guide rail clamp of Claim 2, wherein said first fastener comprises a screw.
6. The guide rail clamp of Claim 1, wherein one of said clamp halves comprises at least one peg extending from a first inner surface thereof and said other clamp half comprises at least one hole in a second inner surface thereof to receive said peg.
7. A guide rail clamp comprising:
 - a first clamp body having a first clamping edge extending in a longitudinal direction, and a first slot extending transversely through said first clamp body, the first slot comprising concave arcuate sections adapted to receive a support member with a circular cross section, said arcuate sections lying between straight sections adapted to receive a rectangular support member; and
 - a second clamp body having a second slot alignable with the first slot, said second body being configured to be secured to said first body to clamp a guide rail.

8. The guide rail clamp of Claim 7, wherein the second body comprises a second clamping edge extending in the longitudinal direction, and wherein the second slot extends transversely through said second clamp body and the second slot with substantially the same shape as the first slot.

9. The guide rail clamp of Claim 8, wherein the arcuate sections of the first and second clamp bodies are circular arcs having a common central axis.

10. The clamp of Claim 9, further comprising a nut sandwiched between the first and second clamp bodies, the nut being adapted to receive a set screw, the set screw having a longitudinal axis extending perpendicular to and intersecting said common central axis of said arcuate sections.

11. The clamp of Claim 10, wherein the set screw is adapted to extend at least partially into said first and second slots.

12. The clamp of Claim 11, wherein the set screw is adapted to extend into said slot to a plane defined by a pair of straight sections surrounding one of said arcuate sections.

13. The clamp of Claim 7, further comprising first and second fasteners extending through the first and second clamp bodies, the fasteners being adapted to secure the first and second clamp bodies to one another.

14. The clamp of Claim 13, wherein the fasteners are adapted to clamp a guide rail between the first and second clamping sections.

15. The clamp of Claim 7, wherein the first body further comprises at least one pin extending in the transverse direction, and the second body comprises at least one hole adapted to receive said at least one pin.

16. A method of using a guide rail clamp comprising:

providing a clamp comprising first and second clamp bodies having a clamping section configured to clamp an elongate guide rail extending in a longitudinal direction, and a slot extending transversely through said clamp bodies, said slot comprising arcuate sections to receive a support member with a circular cross section and flat sections to receive a rectangular support member;

providing a guide rail;

providing a support member having a circular or rectangular cross section;

aligning the first and second clamp bodies and assembling the clamp bodies such that the guide rail is captured by the clamping section, and securing the clamp bodies to one another;

inserting the support member through the slot.

17. The method of Claim 16, wherein the support member comprises a circular cross-section.

18. The method of Claim 17, further comprising securing the clamp bodies to the support member with a set screw.

19. The method of Claim 18, wherein a longitudinal axis of the set screw intersects a longitudinal axis of the support member at right angles.

20. The method of Claim 19, wherein the longitudinal axis of the set screw intersects a longitudinal axis of the guide rail.

21. A conveyor system comprising:

a conveyor frame

a support member extending vertically from the conveyor frame;

a clamp secured to the support member and comprising a first clamp body having a first clamping edge extending in a longitudinal direction, and a first slot extending transversely through said first clamp body, the first slot comprising concave arcuate sections adapted to receive a support member with a circular cross section, said arcuate sections lying between straight sections adapted to receive a rectangular support member; and

a second clamp body having a second clamping edge opposable to the first clamping edge and a second slot alignable with the first slot, said second body being configured to be secured to said first body to clamp a guide rail;

a guide rail clamped between the first and second clamping edges and supported in a horizontal plane.

22. The system of Claim 21, wherein the support member has a circular cross-section.

23. The system of Claim 22, further comprising a set screw extending through the clamp and having a longitudinal axis lying in a horizontal plane.

24. The system of Claim 23, wherein the longitudinal axis of the set screw and a longitudinal axis of the support member are perpendicular.

25. The system of Claim 24, wherein the longitudinal axis of the set screw and a longitudinal axis of the guide rail are perpendicular.